

REMARKS/ARGUMENTS

1. Claims 31, 32, 34, and 40-46 are Patentable Over the Cited Art

The Examiner rejected claims 31, 34, and 40-46 as obvious (35 U.S.C. §103(a)) over Schneider (U.S. Patent No. 6,785,728) in view of Bailey (U.S. Patent No. 5,349,663).

Applicants traverse.

Applicants note that on pg. 2 of the FOA, the Examiner stated that this rejection over Schneider in view of Bailey applied to claims 31-39. However, claims 35-39 were previously canceled and the Examiner applied both Schneider and Bailey to reject claims 31, 32, 34, and 40-46 on pgs. 2-22 of the Final Office Action. Accordingly, Applicants proceed on the basis that the Examiner intended to reject claims 31, 32, 34, and 40-46 over Schneider in view of Bailey.

Claim 31 recites a method comprising: receiving a call request from a user to execute an object; determining an access authority for the user; acquiring an object access authority set for the object indicating access authorities for methods called by the object; comparing the user access authority and the object access authority set to determine whether the user access authority permits access to the methods called by the object; and searching a storage section storing execution results for a previous execution of the object prior to executing the call request and in response to determining that the user access authority permits access to the methods called by the object.

The Examiner recognized that Schneider does not teach the claim requirement of acquiring an object access authority set for the object indicating access authorities for methods called by the object, and cited col. 9, lines 60-68 and col. 10, lines 1-2 of Bailey as addressing the shortcomings of Schneider with respect to this claim requirement. (FOA, pg. 5) Applicants traverse.

The cited col. 9 mentions comparing DOMKEY's to determine if a user has authority to access an object. A DOMKEY is a dominance key indicating a relationship of an entity in a hierarchy, such that based on the DOMKEY assigned to entities, some will be superior or dominant in relation to another. (Bailey, col. 2, lines 29-65). Bailey discusses classes of entities including subjects, which represent users or programs interfacing with the system and objects which represent the resources that are controlled, and the rules determine if a subject can access an object. (Bailey, col. 4, lines 23-38). An SDK is a subject DOMKEY for entities acting as a

subject, and all entities that are controlled have an object DOMKEY or ODK. A DOMKEY based on attributes assigned to an entity is referred to as an attribute DOMKEY or ADK. When determining dominance relationships, either the SDK or the ADK of an entity is compared to the ODK to see if the subject entity dominates. (Bailey, col. 7, lines 15-41).

The cited col. 9 mentions that the user ADKs are compared to the ODK of the object the user wants to access, and if any of the comparisons match for the full length of the ADK over the object's ODK then the user has access over the object. If all comparisons fail, the user is not authorized to access the object.

Although the cited Bailey discusses comparing DOMKEYs or authorities to determine whether a user can access an object, there is no teaching or suggestion of the claim requirement of acquiring an object access authority set for the object indicating access authorities for methods called by the object. The Examiner has not cited any part of Bailey that teaches or mentions access authorities for methods called by the object for which access is sought. Instead, the cited Bailey discusses a key or DOMKEY for an object entity as a whole, the ODK, which does not teach the claimed object access authority set indicating access authorities for methods called by the object.

The Examiner further cited the above discussed cols. 9-10 of Bailey as teaching the claim requirement of comparing the user access authority and the object access authority set to determine whether the user access authority permits access to the methods called by the object. (FOA, pg. 5) Applicants traverse.

The cited cols. 9-10 discuss comparing DOMKEYs, indicating a relationship in a hierarchy, of the user (subject) and the object being called. However, there is no teaching or suggestion of comparing a user access authority with an object access authority set indicating access authorities for methods called by the object. Instead, the cited Bailey discusses comparing DOMKEYs associated with the subject user and object being called, but nowhere teaches or mentions comparing an authority of the user with access authorities for methods called by the object.

The Examiner cited col. 26, lines 27-40 of Schneider as teaching the claim requirement of searching a storage section storing execution results for a previous execution of the object prior to executing the call request and in response to determining that the user access authority permits access to the methods called by the object. (FOA, pg. 4) Applicants traverse.

The cited col. 26 mentions that lets a user sort a Resource List by information sets, locations or services. The user may specify the sort and the order in which the categories are used in the sort. The interface further has a search function in which the user enters a search string, and the resource list and descriptions of resources are searched in the orders specified. The first match is displayed.

Although the cited col. 26 discusses allowing a search of resources and sort, there is no teaching of searching a storage section storing execution results for a previous execution of the object prior to executing the call request and in response to determining that the user access authority permits access to the methods called by the object. The cited col. 26 nowhere teaches or mentions searching for results for a previous execution of an object in response to determining that the user access authority permits access to the methods called by the object. Instead, the cited col. 26 mentions a search to find resources that match that are then sorted.

Accordingly, amended claim 31 is patentable over the cited art because the cited combination of Schneider and Bailey do not teach or suggest the combination of claim requirements.

Claims 32, 34, and 40-46 are patentable over the cited art because they depend from amended claim 31, which is patentable over the cited art for the reasons discussed above. Moreover, the following dependent claims provide additional grounds of patentability over the cited art.

Claim 34 depends from claim 31 and further requires passing the call request to an object executor in response to determining that the storage section does not store execution results for the previous execution of the object subject to the call request.

The Examiner cited col. 9, lines 40-65 and col. 10, lines 1-30 of Schneider as teaching the additional requirements of claim 34. (FOA, pg. 8) Applicants traverse.

The cited cols. 9 and 10 discusses access control for database. The database responds to an access request identifying a user and an information resource. The request is granted if the user belongs to a user group which may access the information set of the information resource and the request has a trust level. Each user belongs to one or more user groups and each information resource belongs to one or more information sets. If none of the user groups that the user belongs to is denied access to an information set that the resource belongs to, and if any of the user groups to which the user belongs is allowed to access any of the information sets that the

information resource belongs, the user is allowed access. A sensitivity level indicates the trust level required to access a resource. The trust level can be considered for the user that wants to access, the trust level of the path taken by the access request, and if the access request is encrypted the trust level of the encryption technique.

Nowhere do the cited cols. 9 and 10 teach or suggest passing a call result to an object executor if the storage does not store the execution results for the previous execution of the object that is called. The cited cols. 9 and 10 discuss trust levels for information in a database, and do not teach or mention executing an object if the storage does not store execution results for the object that is called.

Accordingly, claim 34 provides additional grounds of patentability over the cited art because the cited combination of Schneider and Bailey do not teach or suggest the additional requirements of claim 34.

Claim 40 depends from claim 31, and further requires determining methods called by the object; determining an access authority for each determined method; generating the object access authority set to comprise the determined access authorities of the determined methods, wherein the object access authority set indicates access authorities needed to execute the determined methods.

The Examiner cited the above discussed cols. 9-10 of Bailey as teaching the claim requirements. (FOA, pgs. 9-10) Applicants traverse.

As discussed, the cited cols. 9-10 of Bailey discuss comparing DOMKEY's or authorities to determine whether a user can access an object. However, there is no teaching or suggestion in Bailey of determining an access authority for each determined method to generate the object access authority set to indicate access authorities needed to execute the methods called by the object. , there is no teaching or suggestion of the claim requirement of acquiring an object. Instead, the cited Bailey discusses a key or DOMKEY for an object entity as a whole, the ODK, which does not teach or suggest determining or comparing access authorities needed to execute the methods called by the object.

Accordingly, claim 40 provides additional grounds of patentability over the cited art because the cited combination of Schneider and Bailey do not teach or suggest the additional requirements of claim 40.

Amended claim 41 depends from claim 40 and further requires that determining the access authority for each determined method calling additional methods comprises determining the access authorities of the additional methods called by the method, wherein the object access authority set for the method additionally includes the determined access authorities of the additional methods called by the method.

Applicants amended claim 41 to depend from claim 40.

The Examiner cited the above discussed cols. 9-10 of Schneider as teaching the additional requirements of these claims. (FOA, pgs. 10-11). Applicants traverse.

The cited cols. 9 and 10 discusses access control for database. The database responds to an access request identifying a user and an information resource. The request is granted if the user belongs to a user group which may access the information set of the information resource and the request has a trust level. Each user belongs to one or more user groups and each information resource belongs to one or more information sets. If none of the user groups that the user belongs to is denied access to an information set that the resource belongs to, and if any of the user groups to which the user belongs is allowed to access any of the information sets that the information resource belongs, the user is allowed access. A sensitivity level indicates the trust level required to access a resource. The trust level can be considered for the user that wants to access, the trust level of the path taken by the access request, and if the access request is encrypted the trust level of the encryption technique.

Although the cited cols. 9-10 discuss determining whether a user can access an information resource by comparing access for user groups to which the user belongs and information sets to which the requested information resource belongs, there is no teaching of the claim requirements of generating or considering an object access authority set indicating authorities of methods called by the object and additional methods called by the methods called by the object.

Accordingly, claim 41 provides additional grounds of patentability over the cited art because the cited combination of Schneider and Bailey do not teach or suggest the additional requirements of claim 41.

Claim 42 depends from 40 and further requires that access to the execution results is not granted to the user if the access authority for one determined method is unknown.

The Examiner cited the above discussed cols. 9-10 of Schneider as teaching the additional requirements of these claims. (FOA, pg. 12) Applicants traverse.

Although the cited cols. 9-10 discuss determining whether a user can access an information resource by comparing access for user groups to which the user belongs and information sets to which the requested information resource belongs, there is no teaching or mention that access to the execution results of executing the method called by the object is not granted if the access authority for one method called by the object the user wants to access is unknown.. The Examiner has not cited any part of Schneider or other art that discusses denying access to the execution results is not granted if the access authority of a method called by the requested object is unknown.

The Examiner has not cited where Schneider or other art teaches or suggests the distinction of the claims of denying access to execution results if access authority for one method called by the requested object is unknown.

Accordingly, claim 42 provides additional grounds of patentability over the cited art because the cited combination of Schneider and Bailey do not teach or suggest the additional requirements of claim 42.

Claim 43 depends from claim 42 and further requires that the object is executed even if access to the execution results is not granted.

The Examiner cited the above discussed cols. 9-10 of Schneider as teaching the additional requirements of these claims. (FOA, pg. 14) Applicants traverse.

Although the cited cols. 9-10 discuss determining whether a user can access an information resource by comparing access for user groups to which the user belongs and information sets to which the requested information resource belongs, there is no teaching or mention that an object is executed even if access to execution results is not granted. The Examiner has not cited where Schneider or other art teaches or suggests the distinction of the claims of executing an object even if access to execution results are not granted.

2. Claim 33 is Patentable Over the Cited Art

The Examiner rejected claim 33 as obvious (35 U.S.C. §103(a)) over Schneider in view of Bailey and further in view of Ross (U.S. Patent No. 6,629,135). Applicants traverse.

First off, claim 33 is patentable over the cited art because it depends from claim 31, which is patentable over the cited art for the reasons discussed above and for the additional following reasons.

The Examiner cited col. 5, lines 56-61 of Ross as teaching the additional requirements of claim 33. (FOA, pg. 22) Applicants traverse.

The cited col. 5 mentions an object cache containing responses to previously submitted requests. Items in the cache have an expiration time. The cache reduces the load on the application tier.

Although the col. 5 discusses caching responses to a previous request, there is no teaching of transmitting execution results for previous execution of the object prior to executing the object. Instead, the cited col. 5 discusses an object cache containing objects, but does not teach that the cache is used to transmit execution results for a called object as claimed.

Accordingly, claim 33 provides additional grounds of patentability over the cited art because the cited combination of Schneider and Ross do not teach or suggest the additional requirements of claim 33.

3. Added Claims 47-64

Added claims 47-55 include the requirements of claims 31, 33, 34, 40-44, and 46 in system form. The preamble and first three limitations of claim 47 are disclosed in canceled claim 21 presented in the Preliminary Amendment filed with the Application and in at least FIGs. 1, 2, and 3 and pgs. 15-18 of the Specification.

Added claims 56-64 include the requirements of claims 31, 33, 34, 40-44, and 46 in compute readable storage medium form. The preamble is disclosed in at least canceled claim 35 presented in the Preliminary Amendment filed with the Application and in at least pg. 27 of the Specification.

Applicants submit that claims 47-64 are patentable over the cited art because they substantially include the requirements of claims 31, 33, 34, 40-44, and 46.

Conclusion

For all the above reasons, Applicant submits that the pending claims 31-34 and 40-64 are patentable. Should any additional fees be required beyond those paid, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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